NEWSLEAK

Volume 14, Issue 2
April/June 2003

SC DHEC
Bureau of Water

Top Ten Reasons Why Permitting Project Reviews are Delayed

by Shawn M. Clarke, P.E. - Manager, Drinking Water Permitting

The Water Facilities Permitting Division approved over 1,300 drinking water projects in 2002. Many of these projects were delayed because review letters had to be sent to the engineer for various reasons. We have put together a "Top Ten" list of common problems which delay projects. It is suggested that this list be checked before a project is submitted.

1. **Flow test results.** All flow test results submitted must have been performed in the past year.
2. **Operation and Maintenance Letters.** There may be some projects where the original owner will not be responsible for the O&M of the project once it is completed. For these projects a letter from the future owner or responsible party must be submitted stating that they agree to own, operate and maintain the project (lines, well, tanks, etc.).
3. **Feasibility/Viability study.** A feasibility study must be submitted for all new systems. The feasibility study must show the cost of creating a new system versus the cost of connecting to an existing system. The Viability study must show how much it will cost to operate the proposed system (including operators if required). If the system is a community water system, it must include water rates and a five year financial projection showing that the system can remain viable.
4. **Calculations.** Calculations must be submitted for all projects involving water lines, pumps, and chemical treatment. These calculations must be for the design rate of the project.
5. **Well performance test.** A well performance test must be carried out as detailed in regulation R.61-58.2.B(12). This includes the pumping test and the well recovery, the name(s) of those who performed the test, and the method of measurement used for the test.

continued on page 4 >>

Radionuclides

by Patrick Metts, Drinking Water Compliance Monitoring

There are five major contaminants that are monitored in drinking water: Gross Alpha, Beta, Radium 226, Radium 228 and Uranium. Each contaminant has its own Maximum Contaminant Level (MCL), with the exception of Radium 226 and Radium 228, which have a combined MCL.

Contaminant	MCL
Gross Alpha	15 pCi/L
Beta	50 pCi/L
Combined Radium 226/228	5piCi/L
Uranium	30 pCi/L

Gross Alpha, Radium 226 & 228, and Uranium naturally occur in some drinking water sources. Beta particle and photon radioactivity may occur due to contamination form facilities using or producing radioactive materials.

The majority of systems in the State of South Carolina that have problems with Radionuclides have elevated levels of Combined Radium 226/228.

When the Department monitors for Radionuclides, they will collect an initial sample from a system. If that sample exceeds the MCL for one of the contaminants it will be monitored quarterly for that particular contaminant. If the second sample exceeds the MCL, the Department will issue a Notice of Exceedance letter. Compliance for Radionuclides is based on a Running Annual Average (RAA) of four

continued on page 5 >>

Upcoming Events

Backflow Prevention Certification
August 12-14, 2003
Clemson, South Carolina
For more information, call John Watkins at (803) 898-3567

National Environmental Training Center for Small Communities Institute
July 28–August 1
West Virginia University
For more information, call (800) 624-8301 or e-mail MaryAlice.Dunn@mail.wvu.edu

Inside this Issue

D H E C
PROMOTE PROTECT PROSPER
South Carolina Department of Health and Environmental Control

Published by SC DHEC Bureau of Water
Editor: Carol K. Roberts
robertck@dhec.sc.gov
(803) 898-3542

CR-005078 MAC 06/03

2003 State Revolving Funds Available

The State Revolving Fund (SRF) Program provides long-term loans to communities for construction, distribution, and collection activities of drinking water and clean water (wastewater) facilities. South Carolina has recently been notified of the availability of Fiscal Year 2003 Drinking Water SRF funds of over $8,000,000. A share of this amount may be available for your drinking water project.

To submit a project questionnaire and get on the priority list, visit our website or contact Tom McDonough at (803) 898-4038.

The SRF Loan Program is on the web at http://www.scdhec.net/water/html/srf.html.

NETCSC Develops On-line List of Regulations Affecting Smaller Systems

From E-train, The Environmental Training Newsletter for Small Communities Winter/Spring 03

If you want to know what water and wastewater regulations affect small communities, here is an easy way to find out. The National Environmental Training Center for Small Communities (NETSCS) offers a list of more than 20 rules and policies that may affect small communities on its Web site.

This helpful list describes applicable regulations; the size of communities affected; specific rules for different size communities; and current, upcoming, and future Safe Drinking Water Act and Clean Water Act regulatory dates.

Many helpful contacts and sources are included on the site. Often, U.S. Environmental Protection Agency Web site links provide additional details. NETSSC also has included a glossary of acronyms and important terms.

To access this information, go to http://www.nesc.wvu.edu/netcsc/netcsc_regs.html.

Protecting the Source

Source Water Assessments Completed

by Harriet Gilkerson, Groundwater Management Section

The South Carolina Department of Health and Environmental Control (DHEC) recently sent source water assessment reports to all federally defined public water supply systems. Federally defined systems are those systems that have at least 15 service connections or provide water to at least 25 people for 60 or more days out of the year. A Source Water Assessment is a report that provides basic information to public water suppliers and the general public about their drinking water source. The assessment contains important information about sources of drinking water and how susceptible they may be to contamination.

Each Assessment includes the following information:

- Determination of Source Water Protection Area(s) - A description of the drinking water source (e.g. well or lake) and the land area that contributes water to that source. This will include a map showing the location of the Source Water Protection Area (SWPA).

- Potential Contaminant Source Inventory – A listing of the land uses and activities within the SWPA that could potentially release contaminants to the source water. This will include a map showing the location of the potential contaminant sources within the SWPA.

- Susceptibility Analysis - Evaluation of the contaminant inventory to determine the relative potential of a contaminant reaching a source water intake in an amount that would adversely impact drinking water quality. Susceptibility is the combination of natural vulnerability of the water source to an impact and the physical and chemical properties of the potential contaminants. The analysis is used to determine how likely it is that a potential contaminant source will affect a nearby drinking water source.

What do I need to do with the Assessment?

The Assessment contains important information that can be used to manage potential sources of contamination near your well or surface water intake. DHEC will be providing more information to public water systems about the potential uses of the Assessment and local Source Water Protection efforts. Please review the Assessment to make sure that all information is accurate. If any corrections are needed, notify the contact listed in the Assessment.

Distribution of Source Water Assessments

DHEC will provide Source Water Assessments to approximately 1,500 federally defined public water supply systems. Additionally, DHEC is required by federal regulations to make these Assessments available to the public. The assessments are available on DHEC's Web site at http://www.scdhec.net/water.

For security reasons, the Assessments provided to the public do not include the specific locations of drinking water wells or surface water intakes. In addition, potential contaminant sources will only be identified by relative susceptibility. Site-specific information (e.g. facility name and address) about the potential contaminant source will not be included in the Assessments made available to the public.

To Find Out More

If you have questions about Source Water Assessments, contact Rob Devlin at 803-898-3798 e-mail him at devlinrj@dhec.sc.gov or visit our Web site.

Exceeding a Lead and Copper Action Level

by Patrick Metts, Drinking Water Compliance Monitoring

When collecting samples for lead and copper, there is always the chance that one or more of the samples may exceed either the lead and/or copper action level. An exceedance in lead and/or copper is not an automatic violation. Instead, a water system is sent a "Notification of Exceedance" letter detailing what they are required to do following an exceedance. The system must complete four items: Water Quality Parameters, Public Education, Source Water Monitoring and the Optimum Corrosion Control Treatment (OCCT) Recommendation. With each item, there is an assigned timeline in which the water system must complete the requirement. If at any time a system fails to complete one of the requirements within its given time frame, the system is issued a Notice of Violation.

Water Quality Parameters

Water quality parameter collection includes collecting water samples for the analysis of pH, alkalinity, calcium, conductivity and temperature. Within thirty days receipt of an exceedance letter, a system must have the results of these analyses to the Department. The system must have the samples collected and analyzed by a certified laboratory.

Public Education

The item is only required when a system has a lead exceedance. The purpose of this requirement is to make the water system's drinking water consumers aware that elevated levels of lead were discovered in the water. The Public Education requirement also serves to inform the public of the possible health effects from elevated levels of lead and who is most susceptible to these health effects. This information must be distributed to the public, and a copy of the system's public education efforts must be submitted to DHEC within sixty days receipt of the exceedance letter.

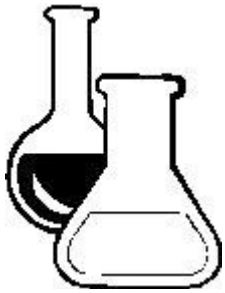
Source Water Monitoring

If a system exceeds the action level, then they must sample the water supply source. This sampling is done to determine if there is a lead/copper problem at the source itself. There is no cost to the system to conduct the source sampling. The system owner or main operator receives bottles to collect the sample(s). A DHEC contract laboratory performs the analysis. The system has six months upon receipt of the exceedance letter to complete the source water monitoring.

The OCCT Recommendation

To comply with this requirement, a system must recommend a plan of action to correct the indicated problem. The recommendation is made via the completion of a "Desktop Evaluation Form" that can be obtained through DHEC. Once completed by the system, this form provides the Department with a detailed analysis of the water. The system has six months to make their recommendation to the Department once an exceedance has occurred. Based on this information, the Department will determine if the OCCT Recommendation is aggressive enough to lower the present levels of lead and/or copper in the system. If the Department determines that a more aggressive approach is needed, then it will provide the system with several alternatives.

Once the OCCT has been implemented, the system will have two consecutive six month monitoring periods for lead and copper to show that their treatment has been effective in lowering the levels of lead and copper in the system. However, if the system fails either round of sampling, the Department will require that the system provide records to show it has been operating the OCCT in the approved manner.



Chlorine Gas Notification

by Tricia H. Kilgore, Drinking Water Permitting

Chlorine helps to make our drinking water safe. However, in large amounts chlorine can be very dangerous. A leak or break in a chlorine gas cylinder is a hazard to anyone nearby. A cylinder rupture is a risk to public health. DHEC's Bureau of Air calculated that if a 150 lb chlorine gas cylinder ruptured, the gas plume could travel up to 0.8 miles.

For new construction or modification to existing facilities, the drinking water regulation requires that systems must deal with the risks to public health from chlorine gas. This requirement is for chlorine gas only and not for liquid chlorine solutions. Most surface water plants and larger facilities handle this risk with a scrubber. For smaller facilities a scrubber can be too expensive. Therefore, the risk must be dealt with differently.

For all new construction at smaller water facilities (less than a ton of chlorine gas), the neighboring residents must be notified about the existence of chlorine. The notice must include these three things:

- the presence of chlorine gas at the site,
- the characteristics of the leak detection alarm (sounds, lights, etc.), and
- what to do in the event that chlorine gas is seen or smelled or an alarm is seen or heard.

All residents within a 0.8-mile radius of the site must be notified about the chlorine gas. Usually residents are informed with a letter. The neighbors must be notified before the system can be used. Evidence of the notification must be submitted to the DHEC.

Top Ten Reasons Why Permitting Project Reviews are Delayed

<< continued from page 1

6. **Chemical feed lines.** Chemical feed lines must be shown or specified to be color-coded and labeled.

7. **Wellhead Protection Area.** The Wellhead Protection Area inventory must be submitted with the project for all new wells. This must include the Latitude and Longitude, to the nearest second, of the well along with the design pump rate.

8. **NSF Certification.** All chemicals added to drinking water must be certified as meeting the standards of the American National Safety Institute/National Sanitation Foundation.

9. **100-year flood and Topographical maps.** All wells must be either above the 100-year flood elevation, or must be protected above the 100-year flood elevation. Also, the site plan for all new well projects must include, for the 100-foot radius, a topographical relief detail with contour intervals no greater than two feet. If the land is flat, please show at least one contour line for a reference.

10. **Water Quality parameters.** All test well projects must include in the specifications the required water quality parameters that will be tested. All follow-up projects must include these required test results. Please make certain that the results of all of the parameters are provided in the follow-up package. This includes dioxin, unless the Department has granted a variance.

Corrections to Drinking Water Regulation

On April 25, 2003, DHEC published the following Errata in the State Register to correct some cross-referencing errors found in the recently published drinking water regulation, R.61-58. Please note these corrections in your copy of the regulation. The most recent version of the regulation was published in February 2003 and is available via our website at http://www.scdhec.net/water/html/reg.html#dw.

ERRATA
Regulation 61-58, *State Primary Drinking Water Regulations.*

The amendments to R.61-58 published in the State Register, Volume 26, Issue No. 3 (May 24, 2002) deleted R.61-58.1.O(2) and renumbered existing items (3) through (14) as (2) through (13). Renumbered sections R.61-58.1.O(5), (6), and (7) contained a cross-reference to R.61-58.1.O(4) which should be corrected to read R.61-58.1.O(3). Renumbered section R.61-58.1.O(10) contained a cross reference to R.61-58.1.O(10) which should be corrected to read R.61-58.1.O(9). This errata will correct these references as follows:

Correct R.61-58.1.O(5) to read:

(5) The Department may modify an operating permit at any time to include any new promulgated requirements of the Act or these Regulations, to address requirements necessary to ensure compliance with the State Safe Drinking Water Act and these regulations, to include any approved or permitted construction modifications to the system, or to modify a compliance schedule. Permit modifications will be issued in accordance with R.61-58.1.O(3).

Correct R.61-58.1.O(6) to read:

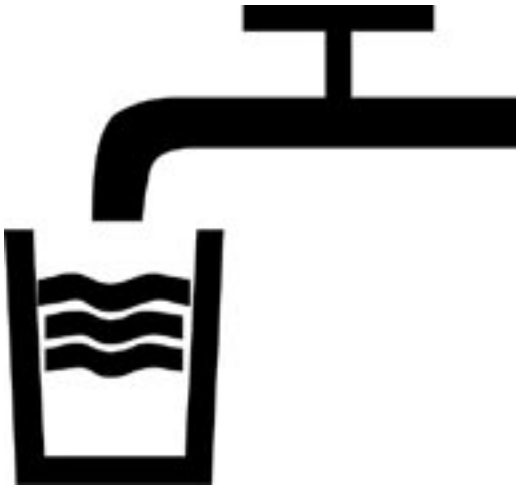
(6) The permittee may request a modification of the operating permit at anytime with adequate justification. The permittee shall complete and submit to the Department an operating permit application form along with a detail justification for the modification(s) requested. Permit modifications will be issued in accordance with R.61-58.1.O(3).

Correct R.61-58.1.O(7) to read:

(7) An operating permit is non-transferable, except with prior approval of the Department. The permittee shall submit written notification to the Department at least 30 days in advance of the proposed transfer. This notification shall include an operating permit application form which has been completed by the proposed new owner of the system. The Department may request on a case-by-case basis that the proposed new owner of the system submit a business plan which shows how the system will be managed to ensure its long-term viability. If the Department approves of the transfer, a new operating permit will be issued to the new owner of the system in accordance with R.61-58.1.O(3).

Correct R.61-58.1.O(10) to read:

(10) Once the permittee has satisfactorily complied with the requirements of R.61-58.1.O(9) and necessary corrections have been made to the water system, the permittee may request that the Department revise the sanitary survey rating on the operating permit.



Certification News

by Valerie A. Betterton,
Director, Water Enforcement Division, DHEC ECB Board Representative

Renewal Information

If you did not renew your license by June 30, 2003, it is expired.

If your license is expired, you can still renew before October 1,2003. However, in addition to your renewal fee, you will be required to pay a $200.00 penalty. Licenses will be invalid if not renewed by September 30th.

CEU's are also due this year. Do not send CEU documentation to the Environmental Certification Board (ECB). Instead, indicate on the renewal form the number of hours that you have completed. It is your responsibility to maintain your personal CEU information in the event that you are audited.

Certification Upgrade Information

An affidavit of employment must be completed and submitted to the ECB for all operators requesting an upgrade or an original license.

Collection System Operators

Mandatory certification of collection system operators will not occur this year. EPA has drafted a regulation, but it has not been finalized. Once finalized, systems will have two years to comply with the certification requirement.

Any questions concerning certification can be addressed to Dona Caldwell at the ECB. (803) 896-4430 or E-mail at caldweld@llr.sc.gov

Enforcement Division Report

During January 1, 2003 through March 31, 2003, the Enforcement Division issued 5 Consent Agreements, 30 Consent Orders, 3 Administrative Orders and 2 Emergency Orders. The Water Enforcement Division assessed approximately $227,343.00 during the first quarter of 2003.

More information about enforcement activities within DHEC may be found at http://www.scdhec.net/eqc/admin/html/eqcmain.html#Enforcement.

	*(CA)	(CO)	(AO)	(EO)
Agricultural Facilities				
Dams and Reservoirs				
Drinking Water		05		02
Groundwater	05	01		
Recreational Waters		05		
Residential Wells		04	01	
Stormwater & Sediment Control		01		
Wastewater		14	02	

*Consent Agreement/Consent Order/Administrative Order/Emergency Order

Radionuclides

<< continued from page 1

consecutive quarterly averages. Only when the average of these four quarterly results exceeds the MCL will a Notice of Violation (NOV) be issued. After the NOV is issued, the system has thirty (30) days to provide Public Notice to its drinking water consumers. Public Notice serves to alert the public to the violation and to provide them with information on the possible health risks associated with exposure.

Water systems with persistently high levels of radionuclides face three options:

1. Treatment – currently in the State of South Carolina there is not a water system using treatment to solve a radionuclide problem. Disadvantages to treatment are cost and the need to have a certified operator to implement the treatment.
2. Drill a new well. However, this too can by expensive. There is also the risk of tapping into the same aquifer.
3. Tie into another pre-existing system. The Department can verify that the other system does not have a problem with radionuclides.

CCR Reminder

July 1st is the deadline date to issue your Consumer Confidence Report to your customers and to submit a copy to DHEC. Certification forms are due to DHEC within ninety days issuance of the CCR, or by October 1st, depending on which date comes first. Copies of the CCR and certification forms should be addressed to:

DHEC Bureau of Water
Frank Dukes, Drinking Water Compliance Monitoring
2600 Bull Street
Columbia, SC 29201-1708

For more information on the CCR, contact Frank Dukes at (803) 898-3988 or visit our website at http://www.scdhec.net/water/html/dwcompmo.html.

Bureau of Water Telephone Numbers

Main Telephone Number
(803) 898-4300

Main Fax Number
(803) 898-4215

EQC District Offices

APPALACHIA I ..... **(864) 260-5569**
Anderson, Oconee

APPALACHIA II ..... **(864) 241-1090**
Greenville, Pickens

APPALACHIA III ..... **(864) 596-3800**
Spartanburg, Cherokee, Union

CATAWBA ..... **(803) 285-7461**
Lancaster, Chester, York

CENTRAL MIDLANDS ..... **(803) 896-0620**
Richland, Lexington, Newberry, Fairfield

LOW COUNTRY ..... **(843) 846-1030**
Beaufort, Jasper, Colleton, Hampton

LOWER SAVANNAH ..... **(803) 641-7670**
Aiken, Orangeburg, Barnwell, Bamberg, Allendale, Calhoun

PEE DEE ..... **(843) 661-4825**
Florence, Dillon, Marion, Marlboro, Darlington, Chesterfield

TRIDENT ..... **(843) 740-1590**
Charleston, Berkeley, Dorchester

UPPER SAVANNAH ..... **(864) 223-0333**
Greenwood, Abbeville, Laurens, Saluda, Edgefield, McCormick

WACCAMAW ..... **(843) 448-1902**
Horry, Georgetown, Williamsburg

WATEREE ..... **(803) 778-1531**
Sumter, Kershaw, Lee, Clarendon

For Information Call . . .

Lead & Copper
Leslie Owens (803) 898-4149

Bacteriological Monitoring Program
Idris Liban (803) 898-3573

THM and SWTR compliance
Vivianne Vejdani (803) 898-4156

Radiological compliance
Patrick Metts (803) 898-3794

IOC, VOC, and SOC compliance
Wendi Smith (803) 898-3572

State Safe Drinking Water Act Fees
Susan Alder (803) 898-3554

Backflow Prevention and Cross Connection Control
John Watkins (803) 898-3567

Permitting of sources and treatment
Shawn Clarke (803) 898-3544

Permitting of water distribution lines
Wayne Stokes (803) 898-4159

Status of permit applications
Patty Barnes (803) 898-3550

Disinfectants/Disinfection By-product Rule
Doug Kinard (803) 898-3543

NEWSLEAK
SC DHEC Bureau of Water
2600 Bull Street
Columbia, SC 29201
(803) 898-3542
www.scdhec.net/water